

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/30/2024

Reviewed on 01/02/2018

1 Identification

- **Product identifier**
- **Trade name:** Sodium Chlorate
40% w/v Solution
- **Article number:** SPE739
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586
- **Information department:**
Technical Coordinator
Sherman Nelson shermann@aquasolutions.org
- **Emergency telephone number:**
Chemtrec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS03 Flame over circle

Oxidizing Liquids 1

H271 May cause fire or explosion; strong oxidizer.



GHS07

Acute Toxicity - Oral 4

H302 Harmful if swallowed.

Eye Irritation 2A

H319 Causes serious eye irritation.

Specific Target Organ Toxicity - Single Exposure 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS03



GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Sodium Chlorate

- **Hazard statements**

May cause fire or explosion; strong oxidizer.

Harmful if swallowed.

Causes serious eye irritation.

May cause respiratory irritation.

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· **Precautionary statements**

Keep/Store away from clothing and other combustible materials

Take any precaution to avoid mixing with combustibles.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Wear fire/flare resistant/retardant clothing.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use CO₂, powder or water spray to extinguish.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

The substance possesses oxidizing properties.

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

| | | |
|----------------|-----------------|---------|
| CAS: 7775-09-9 | Sodium Chlorate | 32.275% |
|----------------|-----------------|---------|

· **Table of Nonhazardous Ingredients**

| | | |
|----------------|-------|---------|
| CAS: 7732-18-5 | Water | 67.725% |
|----------------|-------|---------|

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4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*
- **After skin contact:** *Generally the product does not irritate the skin.*
- **After eye contact:** *Rinse opened eye for several minutes under running water.*
- **After swallowing:** *Immediately call a doctor.*
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** *No further relevant information available.*
- **Advice for firefighters**
- **Protective equipment:** *No special measures required.*

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** *Not required.*
- **Environmental precautions:**
*Do not allow product to reach sewage system or any water course.
 Inform respective authorities in case of seepage into water course or sewage system.
 Do not allow to enter sewers/ surface or ground water.*
- **Methods and material for containment and cleaning up:**
*Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dispose contaminated material as waste according to section 13.
 Ensure adequate ventilation.*
- **Reference to other sections**
*See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.*

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
*Ensure good ventilation/exhaustion at the workplace.
 Prevent formation of aerosols.*
- **Information about protection against explosions and fires:** *No special measures required.*
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *No special requirements.*

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- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

| | |
|---------------|----------------------|
| Form: | Liquid |
| Color: | Clear to pale yellow |
- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**

| | |
|-------------------------------------|-----------------|
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | 100 °C (212 °F) |

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| | |
|---|---|
| · Flash point: | Not applicable. |
| · Flammability (solid, gaseous): | Not applicable. |
| · Decomposition temperature: | Not determined. |
| · Ignition temperature: | Product is not selfigniting. |
| · Danger of explosion: | Explosive when mixed with combustible material. |
| · Explosion limits: | |
| Lower: | Not determined. |
| Upper: | Not determined. |
| · Vapor pressure at 20 °C (68 °F): | 23 hPa (17.3 mm Hg) |
| · Density at 20 °C (68 °F): | 1.596 g/cm ³ (13.31862 lbs/gal) |
| · Relative density | Not determined. |
| · Vapor density | Not determined. |
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 0.0 % |
| Water: | 67.7 % |
| Solids content: | 40.0 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

CAS: 7775-09-9 Sodium Chlorate

| | | |
|------|------|------------------|
| Oral | LD50 | 1200 mg/kg (rat) |
|------|------|------------------|

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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful

- **Carcinogenic categories**

| |
|---|
| · IARC (International Agency for Research on Cancer) |
|---|

| |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

| |
|--|
| · NTP (National Toxicology Program) |
|--|

| |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

| |
|--|
| · OSHA-Ca (Occupational Safety & Health Administration) |
|--|

| |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

| | |
|--|--|
| <ul style="list-style-type: none"> · UN-Number · DOT · IMDG, IATA | <p style="margin: 0;"><i>Not regulated</i></p> <p style="margin: 0;"><i>UN3082</i></p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG · IATA | <p style="margin: 0;"><i>Not regulated</i></p> <p style="margin: 0;"><i>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SODIUM CHLORATE), MARINE POLLUTANT</i></p> <p style="margin: 0;"><i>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SODIUM CHLORATE)</i></p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | <div style="text-align: center;">  <p style="margin: 0;">Oxidizer 5.1</p> </div> <p style="margin: 0;"><i>Not regulated</i></p> |
| <ul style="list-style-type: none"> · Class | <p style="margin: 0;"><i>Not regulated</i></p> |
| <ul style="list-style-type: none"> · IMDG | <div style="text-align: center;">  <p style="margin: 0;">Oxidizer 5.1</p> </div> |
| <ul style="list-style-type: none"> · Class · Label | <p style="margin: 0;"><i>9 Miscellaneous dangerous substances and articles</i></p> <p style="margin: 0;"><i>9</i></p> |
| <ul style="list-style-type: none"> · IATA | <div style="text-align: center;">  <p style="margin: 0;">Oxidizer 5.1</p> </div> |
| <ul style="list-style-type: none"> · Class · Label | <p style="margin: 0;"><i>9 Miscellaneous dangerous substances and articles</i></p> <p style="margin: 0;"><i>9</i></p> |
| <ul style="list-style-type: none"> · Packing group · DOT · IMDG, IATA | <p style="margin: 0;"><i>Not regulated</i></p> <p style="margin: 0;"><i>III</i></p> |
| <ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: | <p style="margin: 0;"><i>Product contains environmentally hazardous substances: Sodium Chlorate</i></p> <p style="margin: 0;"><i>Yes</i></p> <p style="margin: 0;"><i>Symbol (fish and tree)</i></p> |
| <ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups | <p style="margin: 0;"><i>Warning: Miscellaneous dangerous substances and articles</i></p> <p style="margin: 0;"><i>90</i></p> <p style="margin: 0;"><i>F-A,S-F</i></p> <p style="margin: 0;"><i>Chlorates</i></p> |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | <p style="margin: 0;"><i>Not applicable.</i></p> |

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· **UN "Model Regulation":** UN3082, Environmentally hazardous substances, liquid, n.o.s.
(Sodium chlorate), 9, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

Sodium Chlorate

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS03 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Sodium Chlorate

· **Hazard statements**

May cause fire or explosion; strong oxidizer.

Harmful if swallowed.

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Causes serious eye irritation.

May cause respiratory irritation.

· Precautionary statements

Keep/Store away from clothing and other combustible materials

Take any precaution to avoid mixing with combustibles.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Wear fire/flammable resistant/retardant clothing.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use CO₂, powder or water spray to extinguish.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Environment protection department.

· Contact:

· Date of preparation / last revision

Revision 1.2, 05/30/2024: Reviewed SDS for accuracy. MH/STN

Creation date for SDS 07-23-2014 ls

05/30/2024

· Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Oxidizing Liquids 1: Oxidizing liquids – Category 1

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3